REMARKS

Claim 1 has been amended for informalities and remains herein for consideration. No new matter has been entered.

Rejection Under 35 U.S.C. § 102

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Wu (U.S. Pat. No. 6,676,052.) This rejection is traversed because Wu does not show a driving mechanism having an operating lever directly attached to a rack with a curved locus, and a drive shaft coaxially affixed to the grinding wheel and the pinion gear.

Wu instead describes grinding tool includes a housing consisting of an upper part and a lower part, a lever, a grinding assembly and an one-way member, the grinder to be used in a laid-down in-use position. (Column 1, Lines 43-45.) The one-way member has a round main body which is turnably received in the first portions of the housing, and has teeth on an outer side abutting the teeth of the lever. The main body is connected to a shaft in such a way as to not turn the shaft together with it when the lever is pushed inwardly of the second portions to force the main body to turn counterclockwise, and to be capable of turning the shaft together with the main body when the main body is turned clockwise. (Column 1, Lines 55-65.)

The grinding assembly includes an outer grinding element secured in the second portion of the lower housing part, and an inner grinding element, which is turnably received in the outer element and connected to the lower end of the shaft. Thus, the inner element can be turned relative to the outer element to grind pepper therebetween when the lever is pushed inwardly of the second portion and released repeatedly. (Column 1, Lines 55-65.)

This driving mechanism is not directly attached to a rack with a curved locus and the drive shaft is not coaxially affixed to the grinding wheel and the pinion gear, as described and claimed in the present patent application.

Rejection Under 35 U.S.C. § 103

Claim 1 also stands rejected under 35 U.S.C. § 103(a) as being unpatentable over David or Chen in view of Wu. This rejection is traversed because there is no teaching or suggestion for combining the references, and even if combined they would not provide the claimed invention.

The applicant's invention is directed to a grinding apparatus for single-handed use comprising: a housing, a grinding mechanism having a rotary grinding wheel, a driving mechanism having an operating lever directly attached to a rack with a curved locus, and a drive shaft coaxially affixed to the grinding wheel and the pinion gear, a novel combination not disclosed in the cited references.

The David patent does not disclose a grinding apparatus for single-handed use with "a housing, a grinding mechanism having a rotary grinding wheel, a driving mechanism having an operating lever directly attached to a rack with a curved locus, and a drive shaft coaxially affixed to the grinding wheel and the pinion gear" as now stated in claim 1.

David instead describes an operating lever operatively coupled to the grinding wheel. This operatively coupled lever would not provide an ease of movement because the lever uses an overrunning clutch oriented so that it transmits an operating torque from said operating lever to said grinding wheel only in the course of forward motions of said operating lever. If the David reference incorporated a driving mechanism having an operating lever directly attached to a rack with a curved locus, the direction of said operating torque would not coincide with the operative direction of said grinding wheel. It would apply torque in both directions, completely changing the invention which has no torque transmission from the hub 11 to the drive shaft 8 during counterclockwise rotation of the hub 11 relative to the shaft 8.

Because the overrunning clutch is oriented so that it transmits an operating torque from said operating lever to said grinding wheel solely in the course of forward motions of said operating lever, the invention could not be used in the same way with an operating lever directly attached to a rack with a curved locus and a drive shaft coaxially affixed to the grinding wheel and the pinion gear.

The Chen patent also does not disclose "a grinding apparatus for single-handed use comprising: a housing, a grinding mechanism having a rotary grinding wheel, a driving mechanism having an operating lever directly attached to a rack with a curved locus, and a drive shaft coaxially affixed to the grinding wheel and the pinion gear" as now recited in claim 1.

Chen instead employs a manipulating plate that is movable and mounted in a rectangular opening in the vertical wall in the upper section of the body. This plate can be manually pressed to incline only inward by means of two tennons and two mortises so that a sidewise triangle arm projecting inward from the inner surface of the plate can press down the rack with its tip. When the rack is pressed down, it can rotate the movable gear to move down toward the gear on the same shaft of the worm and finally engage with the gear to rotate it. Only then can the worm rotate together with the gear to rotate the worm wheel and the shaft. This description does not include anything like an operating lever directly attached to a rack with a curved locus.

For the above reasons claim 1 in the application is now clearly patentable over the references and any combination of them. Accordingly the application is in condition for allowance and such action is respectfully solicited. A petition for extension of time under C.F.R. 1.126(a) is submitted along with the appropriate fee. No additional fees are due.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A grinding [grounding] apparatus for single-handed use comprising:

a housing, a grinding mechanism having a rotary grinding wheel,

a driving mechanism having an operating lever directly attached to a rack with a curved locus, and

a drive shaft coaxially affixed to the grinding wheel and the pinion gear.